

## CLAIMS

1. (Currently Amended) An apparatus comprising:  
a flow manager;  
a remote logical port (RLP) model to model a remote physical port (RPP); and  
a trunk scheduler to schedule transmission units directed to the remote physical port.
2. (Original) The apparatus of claim 1 wherein the flow manager comprises:  
a flow shaper; and  
a flow parameter database.
3. (Original) The apparatus of claim 1 wherein the flow manager comprises:  
an RLP scheduler; and  
a flow parameter database.
4. (Original) The apparatus of claim 2 wherein the flow manager further comprises:  
an RLP scheduler.
5. (Original) The apparatus of claim 1 wherein the RLP model comprises:  
an RLP data structure to hold data indicating characteristics of the RPP; and  
an RLP traffic shaper to make a transmission unit eligible consistent with the characteristics of the RPP.
6. (Original) The apparatus of claim 4 wherein the flow manager comprises a plurality of queues, one queue for each flow directed toward the RPP.
7. (Original) The apparatus of claim 6 wherein shaping and scheduling are performed by manipulating pointers to the queues.
8. (Original) The apparatus of claim 1 wherein the trunk scheduler statistically multiplexes an aggregate of the flows directed to a plurality of RPPs.
9. (Original) The apparatus of claim 1 wherein the trunk scheduler operates in a weighted round robin non-work conserving manner.

10. (Original) The apparatus of claim 1 further comprising one of an OC-3 port and a DS-3 port.

11. (Original) A system comprising:  
a broadband communication link;  
a demultiplexer coupled to a plurality of physical ports and the broadband communication link; and  
a network element coupled to the communication link, the network element modeling the plurality of physical ports and providing a two-tier hierarchy of shaping and scheduling of flows directed to the plurality of physical ports.

12. (Original) The system of claim 11 wherein the network element comprises:  
a first flow shaper to shape a plurality of flows directed to a remote physical port (RPP);  
a first scheduler to schedule the flows shaped by the first flow shaper to yield a scheduled flow;  
a second flow shaper to shape the scheduled flow; and  
a trunk scheduler to schedule the flow shaped by the second flow shaper for transmission to the RPP.

13. (Original) The system of claim 11 further comprising:  
a plurality of data structures populated with data indicating characteristics of a remote physical port (RPP); and  
a database populated with flow parameters.

14. (Original) The system of claim 13 wherein a one-to-one correspondence exists between RLP data structures and RPPs.

15. (Original) The system of claim 12 wherein the network element comprises:  
a queue for each flow directed at a physical port and wherein shaping and scheduling are performed by pointer manipulation.

16. (Original) A method comprising:  
modeling a plurality of remote physical ports (RPP) as a plurality of remote logical ports (RLP); and

reflecting quality of service from a control aggregator to the plurality of RPPs.

17. (Original) The method of claim 16 wherein reflecting comprises:  
shaping a plurality of flows directed to a RPP into a plurality of shaped flows;  
scheduling the shaped flow into a scheduled flow;  
shaping the scheduled flow into a shaped scheduled flow; and  
scheduling the shaped scheduled flow for transmission to the RPP>
18. (Original) The method of claim 16 wherein modeling comprises:  
populating a database with an entry indicating an ability of an RPP to handle data.
19. The method of claim 18 wherein modeling further comprises:  
creating a data structure for each flow directed to a remote physical port; and  
manipulating the data structure to indicate eligibility of a transmission unit consistent with the ability of the RPP to handle data.
20. (Original) The method of claim 16 further comprising:  
statistically multiplexing the flows from the plurality of RLPs to the plurality of RPPs.
21. (Original) The method of claim 16 wherein a one-to-one correspondence exists between the RLPs and the RPPs.